Sarton, George

Sarton, George

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Sincerely,

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[*Reprinted from* SCIENCE, *N. S., Vol. XLV., No. 1160, Pages 284–286, March 23, 1917*]

AN INSTITUTE FOR THE HISTORY OF SCIENCE AND CIVILIZATION

To those interested in placing before American students advantages not only greater than are now offered in this country, but greater than those offered abroad, the following statement may suggest an opportunity.

The history of science deals with so large a part of the intellectual development of the race, that it should attract the interest of every thinking person. Such an interest is already manifest among an ever-increasing number of scientists and technicians. Furthermore, a very general interest is also becoming apparent, for example, in the history of the numerous means of locomotion from the first beasts of burden to the airplane of to-day; in the history of computation from the ingenious but rude abacus to the refined calculating machine; in the history of such methods of communication as telegraphy and telephony and in the history of medical and surgical practise.

If we consider it from a higher point of view, the importance of the history of science be-

comes even greater. We then realize that science is the strongest force that makes for the unity of our civilization, that it is also essentially a cumulative process, and hence that no history of civilization can be tolerably true and complete in which the development of science is not given a considerable place. Indeed, *the evolution of science must be the leading thread of all general history.*

The more scientific research becomes specialized, the more do coordinating studies of some kind become necessary to keep scientists interested in one another's work. Specialism, indispensable as it is, should not be allowed to obscure the broader vision, and there is no better way to prepare these coordinating, encyclopedic studies than to unfold as clearly as possible the evolution and interrelations of all sciences. These have not grown independently, but together, the progress of each making further progress possible for all the others. *The history of science is the essential basis of any philosophy of science, indeed of any philosophy which is not mere metaphysics or literature.*

Science is ever growing and is becoming daily a more important factor in the field of education. Science it is which makes it possible for men to tame the forces of nature to their purpose; which is the foundation of all

material power; which is the backbone of our civilization. Knowledge is power, but this power may become a danger if its spirit be false and if it be bent solely upon material achievements. It is only when science is explained and tempered by history that it acquires its whole educational value, and that the main objections to scientific education cease to be valid. *The more science enters into our lives, the more it must be "humanized," and there is no better way to humanize it than to study its history.* Such studies, reconciling the purely scientific, the historic, and the philosophic points of view, would be the source of the soundest and highest idealism.

The field of the history of science as we have defined it is, of course, too broad to be adequately covered by separate departments in any of our universities. This can only be accomplished by an institution devoted strictly to this purpose and adequately equipped for the great work that needs to be done. Such an institution should open its doors freely to the few who are sufficiently advanced to profit by its help, but it should not be hampered by any question of degrees or credits, remaining free to do for the advanced student what it feels will be of service in establishing the highest standards of research and scholarship.

An institute devoted to this work, by what-

ever name designated, would need to be sufficiently endowed to be independent of fees or of large financial returns from its publications. It might be established independently, with a building of its own in any city with abundant library and museum facilities, or it might be endowed to work as part of some institution already organized, such as a large university or a museum of science.

Such an institute should have among its activities the following:

1. To offer to qualified students the best equipment for work and the advice, assistance and encouragement of a small corps of experts in the history of science.

2. To afford to universities, libraries and scholars the opportunity to acquire at cost photographs of important manuscripts, documents and objects, thus making it possible to study leisurely at home many original sources that at present can only be examined abroad and at a considerable expenditure of time and money. To this end there should be secured the best available technicians, with the best types of apparatus, working both in foreign libraries and in the laboratory of the institute.

3. To offer to scientists interested in history, to historians interested in science, and to cultivated philosophers a meeting place worthy of their respect; a clearing-house

where all matters of common interest to them would be centralized, examined and eventually made known to the world.

4. To begin collections of prints, instruments and all other early material bearing on the history of pure and applied science. This activity could in course of time expand into a department of enormous importance, as is clear to any one who has visited the Conservatoire des Arts et Métiers in Paris, the Science Museum in Kensington, or the Deutsches Museum in Munich, foundations with which we have nothing to compare in this country.

5. To publish two journals, one of a popular nature and the other of the highest scientific character. The former should set forth in an interesting manner the latest discoveries in the history of familiar science, appealing to the eye through the best style of illustration and to the intellect through popular but accurate and scholarly statements. It should also give much attention to the history of civilization in all its highest features, and should thus do for history, though in a more scholarly way, what has already been so successfully done for geography. The scientific journal might be a series of editions of important scientific manuscripts or a journal of the type of *Isis* which should record the world's work on the subject. In such a journal great atten-

tion should be given to bibliography, not merely external but also internal and critical. For this purpose the institute should carry on, in its own field, the coordination of the most thorough bibliographical work, mobilizing the best critical talent available.

Such an institute would not rival any department in our universities. It can and should set a higher standard of scholarship by reason of its independence, and it should be looked upon as a valuable aid by every university in this country and abroad, and as a source of supply of material which no university or library can furnish.

The institute would need to begin its work with a small staff of experts; with a small number of well-trained technicians, including photographers and process workers; with bibliographical and clerical assistants; with a well-chosen library; and with the best facilities for scientific bibliographical work. It would, of course, be necessary to do part of the work abroad, since it would be too expensive to assemble in any one place all the scholars whose cooperation would be essential to the best success. This is especially the case with respect to the Oriental civilizations, in connection with which a great amount of pioneer work remains to be done.

The international character of the institute

should also be fully recognized. Although located in America, its field of influence would extend equally to all other countries and it would develop a power for internationalism the value of which could hardly be exaggerated. It is a serious misfortune that, whereas there are thousands of organizations devoted to local history, or to such auxiliary branches as heraldry, genealogy and numismatics, there is nowhere a single one that is dedicated to the historical study of that which is *the greatest common good to all mankind,* the excellent institute in Leipzig being devoted exclusively to the history of medicine. It would place the New World in another light if there could be founded here, especially at this time, an institute which might in the near future become the cradle of new intellectual movement, of a new humanism.

There is already a gratifying interest in the project. Two or three of the finest libraries on the history of science and of its special branches are likely to be given to the institute if it is founded on the lines above set forth.

The following scholars have written to express their interest and sympathy and most of them have promised some kind of collaboration:

Joseph Sweetman Ames, Wilder Dwight Bancroft, Fr. Barry, Alexander Graham Bell, George

David Birkhoff, Franz Boas, Marston Taylor Bogert, James Henry Breasted, George Lincoln Burr, Florian Cajori, William Wallace Campbell, Paul Carus, William Ernest Castle, James McKeen Cattell, William Bullock Clark, Frank Wigglesworth Clarke, Thomas Chrowder Chamberlin, Russell Henry Chittenden, William Thomas Councilman, Henry Crew, Harvey Cushing, Charles Benedict Davenport, William Morris Davis, Arthur Louis Day, John Dewey, Leonard Eugene Dickson, Henry Herbert Donaldson, Jesse Walter Fewkes, Edwin Brant Frost, Fielding Hudson Garrison, George Ellery Hale, Granville Stanley Hall, Charles Homer Haskins, Lawrence T. Henderson, T. William Francis Hillebrand, William Ernest Hocking, R. F. Alfred Hoernlé, William Henry Howell, Edward Vermilye Huntington, Ellsworth Huntington, Morris Jastrow, Jr., David Starr Jordan, Louis Charles Karpinski, Arnold Carl Klebs, George Frederick Kunz, Berthold Laufer, William Libby, Frank Rattray Lillie, Ralph S. Lillie, William Albert Locy, Jacques Loeb, Graham Lusk, Percival Lowell [deceased], Franklin Paine Mall, George Herbert Mead, Samuel James Meltzer, Albert Abraham Michelson, Robert Andrews Millikan, Edward Caldwell Moore, Eliakim Hastings Moore, Ernest Carroll Moore, Arthur Amos Noyes, William Albert Noyes, William Fogg Osgood, George Howard Parker, Ralph Barton Perry, Edward Charles Pickering, Frederick Leslie Ransome, Theodore William Richards, David Riesman, James Harvey Robinson, Julius Sachs, William Thompson Sedgwick, Thomas Jefferson Jackson See, H. M. Sheffer, Paul

Shorey, James Thomson Shotwell, David Eugene Smith, Edgar Fahs Smith, Edward Clark Streeter, Henry Osborn Taylor, Harry Walter Tyler, Victor Clarence Vaughan, Addison Emery Verrill, James Joseph Walsh, Arthur Gordon Webster, William Henry Welch, Edmund Beecher Wilson, James Haughton Woods.

In the matter of corespondence the undersigned will act for those interested in the movement until it is seen whether a more definite organization can be effected.

George Sarton

Harvard University,
Cambridge, Mass.

October 27th, 1917

W. Vernon Brewer,

[illegible], Cambridge, Mass.

Dear Mr. Brewer:

I wonder whether you would be willing to come to [illegible] and give a lecture on "The Wireless Art of Science" on [illegible] the first week of December, say, Tuesday, Wednesday and Thursday, or Wednesday, Thursday and Friday, the 4th, 5th, 6th or 7th.

[illegible] very low, but I [illegible] we would [illegible].

[illegible] small [illegible]. However, we shall [illegible] if you [illegible] at that time. [illegible] you can [illegible], I will [illegible].

[illegible],

Yours sincerely,

Professor.

Cambridge, Mass. Oct 21. 1917
10 Arrow St.

To the President of the University of Toronto.

My dear Mr. President,

I wish to thank you for your kind letter of Oct. 17. Thus far, I have always accepted the conditions which were offered to me, trusting that they were fair to all concerned, & that I was not offered less than other occasional lecturers. The average compensation paid to me last year for each lecture was $63.30. That is including travelling expenses; but many lectures were delivered in the vicinity of Boston: I gave in all a series of 5 lectures (from Monday to Friday) - in Baltimore, at the John Hopkins University and was paid $250.

I would be very glad indeed to speak before the University of Toronto - because it would be my first opportunity to explain my ideals to a Canadian audience. Never has the old controversy "Science vs. humanities" been more discussed than during this war. I believe that there is no other way out than the one I suggest: to "humanize" science. The best way to humanize science is to teach its history.

I am, dear Mr. President,

Yours sincerely,
George Sarton

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10 Avon Street,
Cambridge, Mass.,
2 October 1917.

To the President,
University of Toronto.

Dear Sir:-

Before the war, I lived in Belgium and was the editor of ISIS, an international quarterly devoted to the history of science and published in French, German, Italian and English. Having lost all my belongings through the German invasion, after various vicissitudes, I came over to this country. I am now lecturer on the history of science at Harvard University.

Last year, I delivered a series of six lectures at the Lowell Institute in Boston on "Science and Civilization in the time of Leonardo da Vinci." These lectures are illustrated by 110 slides made from Leonardo's drawings and from contemporary documents. I wonder whether I could not repeat all or some of these lectures under your auspices? I would also readily deliver one introductory lecture to the history of science, or give any one of the lectures from my courses on the history of mathematics (Columbia) or on the history of physics (Harvard).

It is almost unbelievable that whereas hundreds of courses are devoted to general history, or to the history of literatures, arts, religions, in fact to the historical study of every phase of human civilization, none or very few are devoted to the study of the highest one: the development of science. This paradoxical situation will not continue much longer. Any thoughtful observer can but see the many signs of an impending change. Before long, a history of science department at least as important as the department say of the history of art, will be established in each University.

I have thus far lectured before the following institutions: U. of Ill.; George Washington U.; College of the City of N.Y.; Clark; Cornell; Harvard; Lowell Institute; Yale; Johns Hopkins; U. of Mich.; Academy of sciences of Mich.; Columbia (Teacher's College).

I much hope that you too will give me an opportunity to deliver this message. Circumstanced as I am, it would be a godsend to me, and I feel confident that my lectures would bear fruit. Need I add that in saying I am a Belgian, I do so simply to explain my present status; I am anxious to be given a chance on my merits and not because of my need as a Belgian.

Yours sincerely,

D.Sc. (Ghent). Laureate of the 4 Belgian Universities and of the Académie des Sciences, Paris.

1 enclosure.

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October 17th, 1910

Dr. George Hinton,
[illegible] Ivor Street,
Cambridge, Mass.

My dear Sir:

I have your letter stating whether there will be an opportunity of our speaking for a number of lectures [illegible] on "The Science and Civilization of the Far East" [illegible]. It seems our University is rather a [illegible] and [illegible] we find it necessary to exercise [illegible] in all directions. If, however, you will let us know what you would expect for a course of six lectures I will refer the matter to our Board of Trustees and see whether it is possible for them to make an appropriation.

I am,

Yours sincerely,

President.

Cambridge, Mass. 10 Avon str.
Oct 29. 1917

to the President of the University of Toronto.

Dear Mrs. President,

I heartily thank you for the invitation extended to me to lecture before the University of Toronto. The conditions are most acceptable to me, but for the dates. I have already another engagement in the first week of December, and would prefer — if possible — not to give more (also) lectures in the same month as this might be detrimental to my students here. I would gladly accept the same invitation for any week in January or February, or any other month of 1918 - (the more earlier date, the better). I could also come in November (~~11-12~~ 14 or 19-21 or 14. 16 21-23).

The days most convenient to me would be: (1) Monday, Tuesday, Wednesday or (2) Wedn., Thursday, Friday.

I much hope that any of the dates suggested will be agreeable to you, as I am most anxious to explain my views to a Canadian audience.

With kind regards, I am

Yours sincerely
George Sarton.

The information requested is enclosed.

November 1st, 1917

Dr. George Burton,

10 Avon Street,

Cambridge, Mass.

Dear Dr. Burton:

I hope it does, as necessary, will make no
extra call. It is good to see you again. I
wonder what the term control dietary studies are,
and when the lay some will call at your University, Thursday
and Friday. If you will let me know, either by letter or
telegram, will call you? I will probably go still to New York
Harbor and I hear from you.

Yours very truly,

President.

Cambridge, Mass. 10 Avon str.
Nov. 3. 1917.

Dear Mr. President,

I hasten to answer to your kind letter of Nov. 1.
It would give me great pleasure indeed, to lecture before the University of Toronto – in the 3d week of January, that is on:
Wedn., Thursd., & Fr. 16 – 18.
Should any other week in Jan. or Febr. be more convenient to you, I ~~should~~ – just decide yourself: I have no other engagement (this far) during these two months.
I would very much like that on of these 3 lectures might be devoted to explain what the aim & interest of the history of science are, how it should be studied, etc.
Hence, I suggest the following titles:

1 (or 3) The New Humanism

2 (or 1)
3 (or 2) } Science & civilization at the Time of Leonardo da Vinci (illustrated)

1. The place of the earth in the universe
(Progress in mathematics & astronomy)
2. Progress in physics, chemistry, geology.

(Or any other that you might prefer)

looking forward to my visit to Toronto, I am,

With kind regards

Yours sincerely

[illegible]

to the Premises of the University of Toronto

George Sarton, Ghent, Belgian 1884. Married, no child

Docteur ès sciences physiques et mathématiques, Ghent 1911.

Candidat en sciences naturelles, Ghent

Laureate in chemistry of the 4 Belgian Universities, 1907 or 1908

Prix Binoux, Académie des Sciences, Paris 1915

Editor of Isis, an international quarterly devoted to the history of Science, published in French, English, German, Italian — in Belgium (public. interrupted by the war).

Lowell lecturer, Boston 1916

Lecturer on the history of science at Harvard Univ. 1916—

Published many papers on the history of science in Isis and other Belgian, French & American periodicals.

Left Belgium — oct. 1914 — after the German invasion — where (at least temporarily) lost everything.

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November 14th, 1917

Mr. George Sarton,

10 Avon Street,

Cambridge, Mass.

Dear Mr. Sarton:

Shall we make a fixture for the three days in January, Wednesday, Thursday and Friday, the 16th, 17th and 18th? We will leave the subjects of the course to yourself because I am sure you will know the lectures in which you will take most interest.

I am,

Yours sincerely,

President.

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Cambridge, Mass. 10 Avon St.
Nov. 16. 1917

Dear Mr. Falconer,

I hasten to answer to your letter of Nov. 14.
I understand that I am to lecture before the University of Toronto, on Wednesday, Thursday & Friday January 16-18 1918
The titles of the three lectures are the following:

1. The New Humanism
2. }
3. } Science and civilization at the time of Leonardo da Vinci

I look forward to my stay in Toronto, and am, Dear Mr Falconer,

Yours sincerely
George Sarton

I enclose a paper which may interest you.

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January 11th, 1918

Dr. George Sarton,

10 Avon Street,

Cambridge, Mass.

Dear Dr. Sarton:

We are expecting to see you next Wednesday morning. I understand that the train arrives about midday, and your first lecture will be delivered in the afternoon at five o'clock in the Physics Building. I have reserved a room for you at the Queen's Hotel, and will you please go direct from the Station there ?

Yours sincerely,

President.

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May 19th, 1918

Dr. George Sarton,

10 Avon Street,

Cambridge, Mass.

Dear Dr. Sarton:

I have to thank you for sending me the copy of "The New Humanism". We look back with great pleasure to the lectures on this these which you gave to us.

I do not know weather I acknowledged the copies of "La Libre Belgique" which you were good enough to send to me. It is a proof of the indomitable spirit of Belgium that they should have been able to maintain such a paper.

With kind regards, I am,

Yours sincerely,

President.